get()

```
char str[ 10 ];
    for( int i = 0; i < 3; i++ )
        inFile.get( str, 10, '\n');

str

streambuf</pre>
```



i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false

File

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
  inFile.get( str, 10, '\n');</pre>
```

str

streambuf a b c d e \n f g h i j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
    inFile.get( str, 10, '\n');
str a b c d e \0</pre>
```

streambuf \n f g h i j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
    inFile.get( str, 10, '\n');
str a b c d e \0</pre>
```

streambuf \n f g h i j k l \n



inFile.good()	false
inFile.eof()	false
inFile.fail()	true
inFile.bad()	false

File

getline()

```
char str[ 10 ];
    for( int i = 0; i < 3; i++ )
        inFile.getline( str, 10, '\n');

str

streambuf</pre>
```



inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
  inFile.getline( str, 10, '\n');</pre>
```

str

streambuf a b c d e \n f g h i j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
   inFile.getline( str, 10, '\n');
str a b c d e \0</pre>
```

streambuf \n f g h i j k l \n



inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
   inFile.getline( str, 10, '\n');
str a b c d e \0</pre>
```

streambuf f g h i j k l \n



inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
   inFile.getline( str, 10, '\n');</pre>
```

str f g h i j k l \0

streambuf \n | | |



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
  inFile.getline( str, 10, '\n');</pre>
```

str f g h i j k l \0

streambuf



inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char str[ 10 ];
for( int i = 0; i < 3; i++ )
  inFile.getline( str, 10, '\n');</pre>
```

str f g h i j k l \0

streambuf



inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

File

## Stream Extraction Operator >>

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str

streambuf



i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str

streambuf a b c d e \n f g h i j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str a b c \0

streambuf d e \n f g h i j k l \n



abc de\n fghi jkl\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str d e \0

streambuf \n f g h i j k l \n



abc de\n fghi jkl\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str d e \0

streambuf f g h i j k l \n



abc de\n fghi jkl\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str f g h i \0

streambuf j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str j k l \0

streambuf \n | | | |



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str j k l \0

streambuf



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
for( int i = 0; i < 5; i++ )
  inFile >> str;
```

str j k l \0

streambuf



 $\begin{array}{ccc} abc & de \\ fghi & jkl \\ \end{array}$ 

i nFi l e. good()	false
inFile.eof()	true
in Eila fail ()	4
inFile. fail()	true

get()

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c \0

streambuf



 $\begin{array}{ccc} abc & de \\ fghi & jkl \\ \end{array}$ 

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c \0

streambuf a b c d e n f g h i j k l n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c a

streambuf b c d e \n f g h i j k l \n



 $\begin{array}{ccc} abc & de \\ fghi & jkl \\ \end{array}$ 

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c b

streambuf c d e \n f g h i j k l \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

СС

streambuf de n f g h i j k l n



 $\begin{array}{ccc} abc & de \\ fghi & jkl \\ \end{array}$ 

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c k

streambuf 1 \n



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

c l

streambuf \n | | | | | | |



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

 $c \mid n$ 

streambuf



abc de\n fghi jkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char c = '\0';
for( int i = 0; i < 17; i++ )
    c = inFile.get();</pre>
```

 $c \mid n$ 

streambuf



abc de\n fghi jkl\n

inFile.good()	false
inFile.eof()	true
inFile.fail()	true
inFile.bad()	false

## Stream Extraction Operator >> followed by get ()

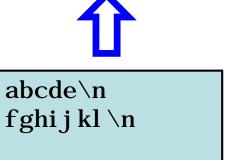
```
char str[ 10 ];
inFile >> str;
inFile.get( str, 10, '\n' );

str
```



inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

File



i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
i nFi l e. bad()	false

File

```
char str[ 10 ];
inFile >> str;
inFile.get( str, 10, '\n' );
str a b c d e \0
```

streambuf \n f g h i j k l \n



abcde\n fghijkl\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
char str[ 10 ];
inFile >> str;
inFile.get( str, 10, '\n' );
str a b c d e \0
```

streambuf \n f g h i j k l \n



abcde\n fghijkl\n

inFile.good()	false
inFile.eof()	false
inFile.fail()	true
inFile.bad()	false

File

## Stream Extraction Operator >>

```
int number;
for( int i = 0; i < 5; i++ )
   inFile >> number;
```

streambuf



100 101\n 102 103\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
  inFile >> number;
```

streambuf 1 0 0 1 0 1 \n 1 0 2 1 0 3 \n



100 101\n 102 103\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
  inFile >> number;
```

streambuf 1 0 1 \n 1 0 2 1 0 3 \n



100 101\n 102 103\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
i nFi l e. bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
   inFile >> number;
```

streambuf \n 1 0 2 1 0 3 \n



100 101\n 102 103\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
i nFi l e. bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
  inFile >> number;
```

streambuf 1 0 2 1 0 3 \n



100 101\n 102 103\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
   inFile >> number;
```

streambuf 1 0 3 \n



100 101\n 102 103\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
   inFile >> number;
```

streambuf \n | | | | | | |



100 101\n 102 103\n

i nFi l e. good()	true
inFile.eof()	false
inFile.fail()	false
i nFi l e. bad()	false

```
int number;
for( int i = 0; i < 5; i++ )
   inFile >> number;
```

streambuf



100 101\n 102 103\n

inFile.good()	true
inFile.eof()	false
inFile.fail()	false
inFile.bad()	false

If the state of streambuf is good, and the first character in streambuf is not '\n', then after the execution of

- inFile. get, '\n' is not removed from streambuf,
- inFile. getline, '\n' is removed from streambuf if found,
- inFile. getline, the state of streambuf is set to fail if '\n' is not found,
- inFile >>, '\n' is not removed from streambuf.

If the state of streambuf is good, and the first character in streambuf is '\n', then the execution of

- inFile. get leaves '\n' in streambuf, reads nothing and changes the state to fail,
- inFile. getline removes '\n' from streambuf, reads an empty string and keeps the state good,
- inFile >> removes '\n' from streambuf, do correct read operation and keeps the state good.